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EXAMINER

PORTNER, VIRGINIA ALLEN

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

File Copy

Office Action Summary	Application No. 09/583,738	Applicant(s) Ghanbari
	Examiner Portner	Art Unit 1645
		
<p>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</p>		
<p>Period for Reply</p> <p>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</p> <ul style="list-style-type: none">- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).		
<p>Status</p> <p>1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>Oct 25, 2001</u></p> <p>2a) <input type="checkbox"/> This action is FINAL. 2b) <input checked="" type="checkbox"/> This action is non-final.</p> <p>3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11; 453 O.G. 213.</p>		
<p>Disposition of Claims</p> <p>4) <input checked="" type="checkbox"/> Claim(s) <u>23-50</u> is/are pending in the application.</p> <p>4a) Of the above, claim(s) _____ is/are withdrawn from consideration.</p> <p>5) <input type="checkbox"/> Claim(s) _____ is/are allowed.</p> <p>6) <input checked="" type="checkbox"/> Claim(s) <u>23-50</u> is/are rejected.</p> <p>7) <input type="checkbox"/> Claim(s) _____ is/are objected to.</p> <p>8) <input type="checkbox"/> Claims _____ are subject to restriction and/or election requirement.</p>		
<p>Application Papers</p> <p>9) <input type="checkbox"/> The specification is objected to by the Examiner.</p> <p>10) <input type="checkbox"/> The drawing(s) filed on _____ is/are objected to by the Examiner.</p> <p>11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a)<input type="checkbox"/> approved b)<input type="checkbox"/> disapproved.</p> <p>12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.</p>		
<p>Priority under 35 U.S.C. § 119</p> <p>13) <input type="checkbox"/> Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).</p> <p>a) <input type="checkbox"/> All b) <input type="checkbox"/> Some* c) <input type="checkbox"/> None of:</p> <ol style="list-style-type: none"><input type="checkbox"/> Certified copies of the priority documents have been received.<input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.<input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).		
<p>*See the attached detailed Office action for a list of the certified copies not received.</p>		
<p>14) <input type="checkbox"/> Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).</p>		
<p>Attachment(s)</p> <p>15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____</p> <p>16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). <u>3</u> 20) <input type="checkbox"/> Other: _____</p>		

Art Unit: 1645

DETAILED ACTION

Claims 23-50 are pending.

Claims 1-22 have been canceled.

Election/Restriction

1. Applicant's election with traverse of Group I in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the searches of Groups I and II would not be undue burden. This has been found persuasive, and Groups I and II will be examined together as a single group.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 23, 34, 37, 47-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the phrases "a bacterial organism" (preamble) and "the bacteriophage preparation consisting of two or more bacteriophage" directed against one of a number of different bacterial genera (section a(2)). Is the method for treatment of one or multiple infecting bacteria? Are the bacteriophage that kill the bacterial organism of the preamble effective against

Art Unit: 1645

the same or different bacteria from which the bacteriophage are screened? How do the two or more bacteriophage relate to the bacterial organism recited in the preamble of the claim? The composition administered contains only a single bacteriophage (claim 23, line 2), but the process of making the preparation uses two or more bacteriophages isolated from different strains of bacterial organisms. There is lack of agreement in the number of bacteriophages administered and used in the formulation of the preparation. How many different types of bacteriophages are there in the preparation administered and what is the bacterial organism specificity in light of the various claim limitations that are not in agreement with each other (singular and plural tenses used)?

Claims 23 and 37 recite the phrase "the preparation consists essentially of two or more bacteriophage". This phrase defines the preparation to contain only TWO bacteriophage particles. How can only two bacteriophage particles be effective in treating infection of a mammal infected with a plurality of pathogenic bacteria? Does this phrase intend to define the preparation as containing two different types of bacteriophage? Clarification is requested.

Claims 23 and 37 recite the phrase "substantially kill" in the preamble. Is the bacterial organism killed or not killed? Absent a specific definition of the relative phrase "substantially kill", it is not clear what this phrase means. Do the phrases "substantially kill" and the characteristic of "at least about 50% of bacterial isolates", mean relative one to the other; do they mean same thing? How can a composition be used to substantially kill only 50% of the bacteria

Art Unit: 1645

infecting a mammal result in treatment of the infection if the bacterial organism is a pathogen and can cause disease?

Claims 33 and 47 recite the phrase "wherein the preparation is resistant to one or more properties selected from the group consisting of". What component of the preparation conveys resistance to high temperatures, exposure to drying, lytic agents, mutator hosts, heat shock or ionic variation? The compositions comprises a bacteriophage and a carrier. As bacteriophages are made up of proteins and nucleic acid material, both of which are sensitive to lytic agents, ionic variation, high temperatures, heat shock and mutator hosts, how are the resistance properties obtained? A "wherein" clause does not provide additional components to the composition, but provides clarification of a component already defined. What is the bacteriophage that has all of these characteristics naturally? Are the resistance characteristics due to something added to the composition or selected for in the bacteriophage? Clarification of what provides the preparation of bacteriophage with the resistance recited is requested.

Claims 34 and 48 recite that the preparation as being capable of surviving for a period of greater than 24 hours following isolation under normal or abnormal conditions. What is a normal condition? What is an abnormal condition? Where does the preparation have to survive? What is providing the preparation with the ability to survive?

Art Unit: 1645

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371C of this title before the invention thereof by the applicant for patent.

5. Claims 23-25, 29-30, 33-39, 43-44, 47-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994).

The claimed invention is directed to a method of treating a mammal suffering with bacterial infection, the method comprising administering to the mammal an effective amount of a bacteriophage composition for a period of time sufficient to substantially kill the bacterial organism, and the composition may further comprise an antibiotic. The bacteria specific bacteriophage will infect staphylococci, Haemophilus, Mycobacteria, Streptococcus, Neisseria, Klebsiella, Enterobacter, Pseudomonas, Escherichia, Salmonella, Shigella or Enterococcus.

(Instant claims 23, 33-34 and 37, 47-48) Merril et al disclose and claim a method of treating a mammal (Merril, claim 4) suffering with bacterial infection (Merril, claim 1) comprising

Art Unit: 1645

administering to the mammal an effective amount of a bacteriophage (Merril, claim 1) composition for a period of time sufficient to substantially kill the bacterial organism (Merril, claim 1). One embodiment disclosed is lyophilized and is thus resistant to ionic variation (see Merril claim 16).

Merril et al disclose specific bacteriophage compositions for staphylococci, Haemophilus, Mycobacteria, Streptococcus, Neisseria, Klebsiella, Enterobacter, Pseudomonas, Escherichia, Salmonella Shigella, Enterococcus Vibrio, Serratia, and Yersinia (see claims 9 and 13) and members of the family of bacteria Enterobacteriaceae, as well as other known bacterial pathogens (see col. 7, lines 37-67 and col. 8, lines 1-53).

(Instant claims 24-25, 29-30,38-39, 43-44) Species specific bacteriophage disclosed include Staphylococcus aureus (col. 8, line 37), Escherichia coli (col. 7., lines 40-50) and Salmonella typhimurium (col. 7, lines 60-61) .

(Instant claims 35-36 and 49-50) Merril discloses the method to further comprise administering an antibiotic. Specific antibiotics for specific pathogens are taught to include amino glycosides, cephalosporins, erythromycin, penicillins, and tetracycline, to name a few (see col. 8, lines 64-67 and col. 9, lines 1-63).

Inherently the reference anticipates the now claimed invention.

Art Unit: 1645

6. Claims 23-24, 33-34, 37-38, 47-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Norris (US Pat. 4,957,686).

The claimed invention is directed to a method of treating infection caused by a bacterial organism in a mammal, wherein the bacterial organism is *Streptococcus mutans* and the composition administered comprises at least two bacteriophages that are host specific and able to treat bacterial infection, together with a pharmaceutically acceptable carrier.

Norris discloses and claims a method of treating bacterial infection in a mammal (see col. 3, lines 62-64) caused by *S. mutans*, *S. sanguis*, *lactobacillae* and *Actinomyces* (see col. 3, lines 1-3 and claims 1 and 3), wherein the composition administered comprises a mixture of bacteriophages specific (claim 3) for the bacterial host together with a pharmaceutically acceptable carrier (see claims 4-10). The reference anticipates the now claimed invention.

7. Claims 23-24, 33-34, 37-38, 47-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Soothill (1992, *Journal of Medical Microbiology*).

The claimed invention is directed to a method of treating infection caused by a bacterial organism in a mammal, wherein the bacterial organism is *Pseudomonas aeruginosa* or *Staphylococcus aureus* and the composition administered comprises virulent and host specific bacteriophage able to treat bacterial infection, together with a pharmaceutically acceptable carrier.

Soothill discloses a method of treating bacterial infection in a mammal (mice, see title) caused by *Pseudomonas aeruginosa* or *Staphylococcus aureus* (see abstract), wherein the

Art Unit: 1645

composition administered comprises a bacteriophage specific for the bacterial organism together with a pharmaceutically acceptable carrier (see page 258, preparation of bacteriophage suspensions, pages 259-261).

The reference inherently anticipates the now claimed invention.

8. Claims 23, 35, 37 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakanelidze (1991, abstract)

The claimed invention is directed to a method of treating infection caused by a bacterial organism in a mammal, comprising administering a composition of virulent and host specific bacteriophage together with a pharmaceutically acceptable carrier and an antibiotic.

Sakanelidze a method of treating infection caused by a bacterial organism in a mammal, comprising administering a composition that comprises a bacteriophage (abstract) that is bacterial host specific(title) together with a pharmaceutically acceptable carrier (autovaccine) and an antibiotic (abstract and title).

Inherently the reference anticipates the now claimed invention.

9. Claims 23-24, 37-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Bogovazova et al (1991, abstract)

The claimed invention is directed to a method of treating infection caused by a bacterial organism in a mammal, comprising administering a composition that comprises a bacteriophage

Art Unit: 1645

that is very virulent and host specific together with a pharmaceutically acceptable carrier, wherein the bacterial organism is Klebsiella pneumoniae.

et al teach
Bogovazova a method of treating infection caused by a bacterial organism in a mammal, wherein the bacterial organism is Klebsiella pneumoniae, the method comprising administering a composition that comprises a bacteriophage (title, abstract) that is bacterial host specific(abstract) together with a pharmaceutically acceptable carrier (intraperitoneal injection formulation).

Inherently the reference anticipates the now claimed invention.

Claim Rejections - 35 U.S.C. § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994) as applied to claims 23-25, 29-30,33-39,43-44,47-50 above, in view of Denney (US Pat. 3,793,151).

The invention is directed to a method of treating Streptococcus pyogenes infection by administering a composition that comprises a Streptococcus pyogenes specific bacteriophage, together with a pharmaceutical carrier to a mammal.

Art Unit: 1645

See discussion of Merril above. Merril et al teach a method of treating Streptococcus infection by administering a composition that comprises a Streptococcus specific bacteriophage, together with a pharmaceutical carrier to a mammal, but differs from the instantly claimed invention by failing to show a phage specific for the S.pyogenes.

Denney teach a method of infecting and lysing a bacteria with a bacteriophage in an analogous art for the purpose of showing a S.pyogenes specific phage (see col. 2, lines 56-66).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the composition of Merril to include the bacteriophage of Denney because both references are directed to methods of utilizing bacteriophage to kill bacteria and Merril teaches means and methods for the selective elimination of bacterial organisms through administering pathogen specific bacteriophages to a mammal and suggests the administration of bacteriophages specific to Streptococcal bacteria and Denney teaches a S.pyogenes specific phage, a known pathogenic bacterial organism.

The person of ordinary skill in the art would have been motivated by the reasonable expectation of success of treating an infection caused by S.pyogenes with a S.pyogenes specific bacteriophage, because Merril teaches bacteriophages will specifically infect and kill both gram negative and gram positive bacteria through administering a composition of bacteria specific bacteriophage to a mammal and Denney teaches that a S.pyogenes bacteriophage that is lytic and able to kill S.pyogenes specifically.

Art Unit: 1645

In the absence of a showing of unexpected results, Merril in view of Denney obviate the now claimed invention.

12. Claims 27 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994) as applied to claims 23-25, 29-30,33-39,43-44,47-50 above, in view of He et al (1992)

The invention is directed to a method of treating *Citrobacter freundii* infection by administering a composition that comprises a *Citrobacter freundii* specific bacteriophage, together with a pharmaceutical carrier to a mammal.

See discussion of Merril above. Merril et al teach a method of treating bacterial infection, by administering a composition that comprises a bacteria specific bacteriophage, together with a pharmaceutical carrier to a mammal, but differs from the instantly claimed invention by failing to show a phage specific for the *Citrobacter freundii*.

He et al teach a *Citrobacter freundii* specific phage in an analogous art for the purpose of showing a phage capable of infecting and lysing *Citrobacter freundii* (abstract, title).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the composition of Merril to include the bacteriophage of He et al because Merril teaches means and methods for the selective elimination of bacterial organisms through administering pathogen specific bacteriophages to a mammal and suggests the

Art Unit: 1645

administration of bacteriophages specific to human pathogens and He et al teach a 99.97% specific phage that is lytic for *Citrobacter freundii*, a known human pathogen.

The person of ordinary skill in the art would have been motivated by the reasonable expectation of success of treating an infection caused by *Citrobacter freundii* with a *Citrobacter freundii* specific bacteriophage, because Merril teaches bacteriophages are useful in the formulation and administration of compositions to a mammal because bacteriophages kill bacteria and not mammalian tissues and He et al teach a *Citrobacter freundii* bacteriophage that is lytic and able to kill *Citrobacter freundii*.

In the absence of a showing of unexpected results, Merril in view of He et al obviate the now claimed invention.

13. Claims 28 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994) as applied to claims 23-25, 29-30,33-39,43-44,47-50 above, in view of Sekaninova et al (1995)

The invention is directed to a method of treating *Klebsiella oxytoca* infection by administering a composition that comprises a *Klebsiella oxytoca* specific bacteriophage, together with a pharmaceutical carrier to a mammal.

See discussion of Merril above. Merril et al teach a method of treating *Klebsiella* infection, by administering a composition that comprises a bacteria specific bacteriophage,

Art Unit: 1645

together with a pharmaceutical carrier to a mammal, but differs from the instantly claimed invention by failing to show a phage specific for the *Klebsiella oxytoca*.

Sekaninova et al teach a *Klebsiella oxytoca* specific phage in an analogous art for the purpose of showing a phage capable of infecting and lysing *Klebsiella oxytoca* (abstract).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the composition of Merril to include the bacteriophage of Sekaninova et al because Merril teaches means and methods for the selective elimination of *Klebsiella* bacterial organisms through administering pathogen specific bacteriophages to a mammal and suggests the administration of bacteriophages specific to pathogens and Sekaninova et al teach a 99.97% specific phage, lytic for *Klebsiella oxytoca*, a known pathogenic organism.

The person of ordinary skill in the art would have been motivated by the reasonable expectation of success of treating an infection caused by *Klebsiella oxytoca* with a *Klebsiella oxytoca* specific bacteriophage, because Merril teaches bacteriophages will specifically infect and kill bacteria through administering a composition of specific bacteriophage to a mammal and Sekaninova et al teach a *Klebsiella oxytoca* bacteriophage that is lytic and able to kill *Klebsiella oxytoca* specifically.

In the absence of a showing of unexpected results, Merril in view of Sekaninova et al obviate the now claimed invention.

Art Unit: 1645

14. Claims 31 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994) as applied to claims 23-25, 29-30,33-39,43-44,47-50 above, in view of Bar-Shalom et al (US Pat. 5,213,808).

The invention is directed to a method of treating bacterial infection by administering a composition that comprises a bacteriophage, together with a pharmaceutical carrier to a mammal, wherein the carrier is a liposome.

See discussion of Merril above. Merril et al teach a method of treating bacterial infection, by administering a composition that comprises a bacteria specific bacteriophage, together with a pharmaceutical carrier to a mammal (col. 9, lines 65-67 and col. 10, lines 1-24), but differs from the instantly claimed invention by failing to show the carrier to be a liposome.

Bar-Shalom et al teach liposomes in an analogous art for the purpose of showing means for delivering an active agent to a mammal, wherein an active agent is a bacteriophage.

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the carrier of Merril with the liposome carrier of Bar-Shalom because Bar-Shalom et al teach liposomes provide a means for the controlled delivery of an active agent to a mammal and provides means for the homogenous dispersion of the bacteriophage in the carrier article for the release of the agent at a constant level (abstract, col. 9, lines 41-57).

The person of ordinary skill in the art would have been motivated by the reasonable expectation of success of treating an infection caused by bacterial organism with a specific bacteriophage, through administering a composition that comprises a bacteria specific

Art Unit: 1645

bacteriophage together with a liposome carrier because Merril teach oral, aerosol, spray, intervenors, intramuscular, intraperitoneal, intrathecal, vaginal, rectal, and topical carrier formulations for administrating a composition and Bar-Shalom teaches a specific carrier that allows for the controlled delivery and release of a homogenous dispersion of active agent, to include bacteriophage in liposome carriers (see col. 9, lines 65-67 and col. 10, lines 1-3).

In the absence of a showing of unexpected results, Merril in view of Bar-Shalom et al obviate the now claimed invention.

15. Claims 31 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merril et al (US Pat 5,688,501; effective filing date of April 5, 1994) as applied to claims 23-25, 29-30,33-39,43-44,47-50 above, in view of Tomalia et al (US Pat. 5,714,166).

The invention is directed to a method of treating bacterial infection by administering a composition that comprises a bacteriophage, together with a pharmaceutical carrier to a mammal, wherein the carrier is a dendrimer.

See discussion of Merril above. Merril et al teach a method of treating bacterial infection, by administering a composition (see Merril col. 9, lines 65-67 and col. 10, lines 1-3) that comprises a bacteria specific bacteriophage, together with a pharmaceutical carrier to a mammal (col. 9, lines 65-67 and col. 10, lines 1-24), but differs from the instantly claimed invention by failing to show the carrier to comprise a dendrimer.

Art Unit: 1645

Tomalia et al teach dendrimers in an analogous art for the purpose of teaching dendrimers as carriers for phages (col. 47, lines 1-3).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the carrier of Merril with the dentrimer of Tomalia et al because Tomalia et al teach dentrimers provide a carrier means for the delivery of high concentrations of a phage material (col. 1, lines 39-43).

The person of ordinary skill in the art would have been motivated by the reasonable expectation of success of treating an infection through administering a composition that comprises a dentrimer and a bacteria specific bacteriophage, because the dendrimer carriers of Tomalia et al provide means for the delivery of a phage in a controlled and targeted manner (col. 1, lines 33-43 and col. 2, lines 10-30) which would be essential to the association of the bacteriophage and bacterial cell in order for the bacteriophage to effectively infect and kill the bacteria causing infection.

In the absence of a showing of unexpected results, Merril in view of Tomalia et al obviate the now claimed invention.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 1645

17. Slopek et al (1987, abstract) is cited to show the effectiveness of bacteriophage treatment for human infection in 550 patients, wherein positive results were obtained in 508 cases of bacterial infection.
18. UK: Studies found enteric bacterial infection may be better treated with bacteriophages than antibiotic therapy when used against E.coli (1983, abstract).
19. Bavoil et al (US Pat. 5,741,697) is cited to show a Chlamydia psittaci specific bacteriophage.
20. Fischetti et al (US Pat. 6,277,399; 6,264,945; 6,254, 866; 6,248,324; 6,056,954) are cited to show compositions of a bacteriophage lysogen for the treatment of bacterial infections.
21. Ghanbari et al (US Pat. 6,121,036) is cited to show compositions of bacteriophage.
22. Jackson (US Pat. 4,828,999) is cited to show the treatment of plant bacterial infections with bacteriophage.
23. Lemelson (US Pat. 4,674,480) is cited to show a composition that comprises a phage and an antibiotic for the treatment of infection (see claim 25).
24. Merril et al (US Pat. 5,766,892; 5,811,093; 5,660,812) are cited to compositions and methods of treating bacterial infection with bacteriophages.
25. Norris (US Pat. 4,891,210) is cited to show bacteriophages used in dental hygiene.
26. Taylor et al (US Pat. 2,851,006) is cited to show a method of preventing bacterial infection of hen eggs using bacteriophages.
27. Vandenbergh et al (US Pat. 4,678,750) is cited to show a method of treating bacterial plant diseases with bacteriophages.

Art Unit: 1645

28. Takahashi (US Pat. 6,322,783) is cited to show compositions of bacteriophages in foods for the prevention of infection.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginny Portner whose telephone number is (703)308-7543. The examiner can normally be reached on Monday through Friday from 7:30 AM to 5:00 PM except for the first friday of each two week period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith, can be reached on (703) 308-3909. The fax phone number for this group is (703) 308-4242.

The Group and/or Art Unit location of your application in the PTO will be Group Art Unit 1645. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to this Art Unit.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Vgp
November 30, 2001


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